

REMARKS

The Office Action dated April 17, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-28 are pending in the application. Claims 2-28 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter is added. Applicant submits the pending claims for consideration in view of the following.

Allowable Subject Matter

Claim 4 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent from including all of the limitations of the base claim and any intervening claims. Applicant appreciatively acknowledges the examination of this claim.

§103(a) Rejection

Claims 1-3 and 5-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over a combination of Sakai et al. (US 7,197,303) and Molnar et al. (US 2002/0044614). The Office Action took the position that Sakai does not disclose calculating at least one dominant interference ratio being the ratio of a signal level of a strongest potentially interfering signal with respect to a sum of signal levels of other potentially interfering

signals and calculating based on the dominant interference ration. However, the Office Action also took the position that these limitations are disclosed by Molnar. Applicant respectfully asserts that a combination of Sakai and Molnar fails to disclose all the limitations of the rejected claims.

Claim 1, upon which claims 2-7 and 14 depend, is generally directed to a method that includes the operations of establishing a radio channel candidate, processing the radio channel candidate with potentially interfering signals, and calculating a carrier to interference ratio for a selected carrier frequency of the radio channel candidate and the potentially interfering signals. The method also includes calculating at least one dominant interference ratio being the ratio of a signal level of a strongest potentially interfering signal with respect to a sum of signal levels of other potentially interfering signals. The method further includes using a criteria based on the dominant interference ratio in a channel selection process for selecting a channel for the connection to be established.

Claim 8, upon which claims 9-11 and 15 depend, is generally directed to an apparatus that includes an establishing unit configured to establish a radio channel candidate. The apparatus also includes a first calculation unit configured to process the radio channel candidate with potentially interfering signals and to calculate a carrier to interference ratio based on a selected carrier frequency of the radio channel candidate and potentially interfering signals. The apparatus further includes a second calculation unit configured to calculate a dominant interference ratio being a ratio of a signal level of

a strongest potentially interfering signal with respect to a sum of the signal levels of other potentially interfering signals. The apparatus further includes a selection unit configured to implement a selection process for selecting a channel for a connection to be established using criteria based on the dominant interference ratio.

Claim 12, upon which claim 13 depends, is generally directed to a system that includes a plurality of stations. At least some of the base stations include an establishing unit configured to establish a radio channel candidate and a first calculation unit configured to process the radio channel candidate with potentially interfering signals and to calculate a carrier to interference ratio based on a selected carrier frequency of the radio channel candidate and potentially interfering signals. The base stations also include a second calculation unit configured to calculate a dominant interference ratio being a ratio of a signal level of a strongest potentially interfering signal with respect to a sum of the signal levels of other potentially interfering signals. The base stations further include a selection unit configured to implement a selection process for selecting a channel for a connection to be established using criteria based on the dominant interference ratio.

Claim 16, upon which claims 17-20 depend, is generally directed to an apparatus that includes a means for establishing a radio channel candidate and a means for processing the radio channel candidate with potentially interfering signals and calculating a carrier to interference ratio based on a selected carrier frequency of the radio channel candidate and potentially interfering signals. The apparatus also includes a means for calculating a dominant interference ratio being a ratio of a signal level of a strongest

potentially interfering signal with respect to a sum of the signal levels of other potentially interfering signals. The apparatus further includes a means for implementing a selection process for selecting a channel for a connection to be established using criteria based on the dominant interference ratio.

Claim 21, upon which claims 22-28 depend, is generally directed to a computer-program embodied on a computer readable medium. The computer program is configured to control a processor to perform operations that include establishing a radio channel candidate and processing the radio channel candidate with potentially interfering signals and calculating a carrier to interference ratio (CIR) for a selected carrier frequency of the radio channel candidate and the potentially interfering signals. The operations also include calculating a dominant interference ratio (DIR) being the ratio of a signal level of a strongest potentially interfering signal with respect to a sum of signal levels of other potentially interfering signals. The operations further include using a criteria based on the dominant interference ratio in a channel selection process for selecting a channel for the connection to be established.

Each of the foregoing claims recites limitations that are not disclose or suggested by a combination of Sakai and Giallorenzi.

Sakai generally discloses a cellular communication system that enables an monitoring of interference. In Sakai, the cellular communication system includes a cell station and a maintenance terminal. The cell station provides a communication service for a personal station, and also executes continuous monitoring of an interfering wave

during a period to produce an interference monitor data representative of a property of the interfering wave. The maintenance terminal produces an interference profile based on the property.

Molnar generally discloses a system and method for reducing interference using co-channel interference mapping. In Molnar, information in an interference map regarding the plurality of candidate interference sources may be used to identify candidate co-channel interference sources that may include a dominant interference source. A received signal may then be demodulated in a manner that cancels at least part of the contribution of any identified dominant interference source by using the information regarding any such interference source contained in the interference map.

However, a combination of Sakai and Molnar fails to disclose or suggest “calculating at least one dominant interference ratio being the ratio of a signal level of a strongest potentially interfering signal with respect to a sum of signal levels of other potentially interfering signals; and using a criteria based on the dominant interference ratio in a channel selection process for selecting a channel for the connection to be established,” as recited in claim 1, and as similarly recited in claims 8, 12, 16, and 21.

As mentioned above, the Office Action properly states that Sakai fails to disclose these limitations. Similarly, Molnar fails to disclose these limitations. Instead, Molnar discloses the concept of identifying the dominant interference source. Thus, the only disclosure of Molnar is identifying which interference source provides the greatest interference. There is no suggestion of calculating the dominant interference ratio which

is the ratio of the strongest potentially interfering signal with respect to a sum of signal levels of other potentially interfering signals. Furthermore, there is no suggestion or disclosure of using a criteria based on the dominant interference ratio in a channel selection process for selecting a channel for the connection to be established.

Firstly, Molnar is concerned with a method of demodulating a received signal and not selecting a channel for a connection to be established. Secondly, identifying a dominant interference source is not the same as calculating the dominant interference ratio. However there is no disclosure of determining a dominant interference ratio. Rather there is disclosure of identifying dominant interference sources. Rather, Molnar discloses an interference map that may include stored estimated parameters associated with a plurality of candidate co-channel interference sources. The information and the interference map may then be used to determine which, if any of the interfering sources represents a dominant interference source with respect to a particular sample of the received signal. When a dominant interference source is present, the stored information regarding that interference source may be used to at least partially cancel out the identified interference source by jointly demodulating the identified interference source and the desired signal. It is clear therefore that a dominant interference ratio, as defined in claim 1 is not calculated. Furthermore, it is difficult to see how calculating such a ratio would help in the demodulation of a received signal.

Accordingly, a combination of Sakai and Molnar fails to disclose or suggest all the limitations of claims 1, 8, 12, 16, and 21. Therefore, Applicant respectfully requests that

the rejection of claims 1, 8, 12, 16, and 21 be withdrawn. Similarly, Applicant respectfully requests that the rejection of claims 2-3, 5-7, 9-11, 13-15, 17-20, and 22-28 be withdrawn, for their dependency from claims 1, 8, 12, 16, and 21, and for the patentable subject matter recited therein.

Conclusion

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



Jared T. Olson
Registration No. 61,058

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Vienna, Virginia 22182-6212
Telephone: 703-720-7800
Fax: 703-720-7802

JTO:skl